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by N. dk Mastrota

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STATE OF CALIFORNIA  
DEPARTMENT OF FISH AND GAME

**PESTICIDE LABORATORY REPORT**

1701 Nimbus Road, Suite F  
Rancho Cordova, California 95670

Lab No: P-2590

Date Received: 1/29/2010

E.P. No. L-023-10

Sample: blood

Index: PCA:

To: Jim Wynn  
San Diego County Agricultural Commissioner's Office  
5555 Overland Avenue Suite 3101  
San Diego, California 92123-1256

Report Date: March 22, 2010

**Remarks**

The San Diego County Agricultural Commissioner's Office investigated dog deaths due to apparent anticoagulant rodenticide poisoning in a suburban area in Fallbrook, San Diego County, California.

**Background**

On January 27, 2010, the San Diego County Agricultural Commissioner's staff responded to a report of dogs being poisoned by anticoagulant rodenticides. Three dogs showed signs of anticoagulant poisoning, and one of these dogs died. Symptoms included blood in the urine. Two of the dogs recovered, one after receiving a Vitamin K antidote. Blood samples were collected from one dog and submitted to the Pesticide Investigations Unit. The blood was sent to the Water Pollution Control Laboratory for anticoagulant analysis.

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**RESULTS OF EXAMINATION**

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The blood contained 711 µg/L diphacinone, a first-generation anticoagulant rodenticide. Anticoagulant rodenticides are Vitamin-K antagonists that disrupt normal blood clotting mechanisms and cause death from hemorrhaging. Blood in the urine is a symptom consistent with anticoagulant exposure (EXTOXNET). Diphacinone has a blood retention time of 8.42 days (USEPA 2004), indicating that the exposure was a recent one. It is not possible to determine the initial dose of diphacinone from the blood concentration. However, given the symptoms, the presence of a high concentration of diphacinone in the blood, and the responsiveness of one dog to the Vitamin K antidote, it is highly likely that the dogs suffered from diphacinone toxicosis.

PESTICIDE INVESTIGATIONS UNIT  
OFFICE OF SPILL PREVENTION AND RESPONSE

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